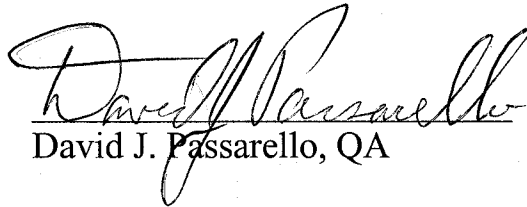


Collider-Accelerator Department

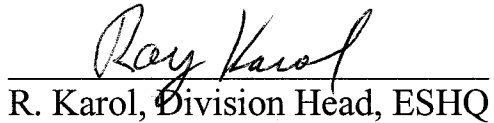
FY 2002 Self-Assessment Program

Prepared by:


David J. Passarello, QA

3/28/02
Date

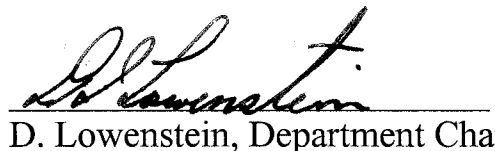
Approved by:


R. Karol, Division Head, ESHQ

3/28/02
Date


E. Lessard, Associate Chair for ESHQ

3-28-02
Date


D. Lowenstein, Department Chairman

3/28/02
Date

Collider-Accelerator (C-A) Department Mission

In support of Brookhaven National Laboratory's broad mission of providing excellent science and advanced technology in a safe, environmentally responsible manner the Collider Accelerator Department is committed to the following:

- ❖ Excellence in environmental responsibility and safety in all C-A Department operations.
- ❖ Develop, improve, and operate the suite of proton/heavy ion accelerators used to carry out the program of accelerator-based experiments at BNL.
- ❖ Support the experimental program including design, construction, and operation of the beam transports to the experiments and partial support of detector and research needs of the experiments.
- ❖ Design and construct new accelerator facilities in support of the BNL and National Missions.

Self-Assessment Program

The objective of the C-A self-assessment program is to provide a systematic approach to performance management. That is, to provide C-A management with information needed to ensure organizational performance objectives are being met and appropriate improvement actions are identified and implemented.

Supporting information for the objectives of Critical Outcome 1.0, Basic Science & Technology, are reported in the BNL Integrated Information Management System. This system provides the data required for the preparation of BNL Appendix B Self Evaluation Reports.

C-A Self-Assessment supporting information e.g. [Program and Facility](#), [Organization](#), [ESHQ Division](#), [Assessment and Inspection Programs](#), [C-A Environmental Management Program](#), [Authorization Basis Documents](#), [Operations and Procedures Manual](#), [Conduct of Operations Agreement](#), [Training Programs and Associated Records](#) and [Tier 1 Safety Inspections](#) is maintained on the Collider-Accelerator web site.

The C-A Department has adopted a self-assessment framework primarily based on the Malcolm Baldrige National Quality Award Criteria. Which are as follows

- Leadership Commitment and Involvement
- Human Resource Development and Management
- Customer Focus and Satisfaction (Customer Value)
- Process Management
- Business and Operational Results
- Compliance with Laws Regulations and Contractual Requirements

For each of the assessment criteria stated above, C-A has established objectives, strategies for meeting the stated objectives, performance measures, and indicators where appropriate. Refer to the Assessment, Objective, Approach and Results Matrix within this document.

In addition to those items outlined in the attached matrix, the implementation of the following, which are improvement items from the C-A FY 2001 Self-Assessment Report, shall be assessed.

1. The C-A Training & Procedures Manager will work with the BNL Training & Qualification Office and the AGS/RHIC User Center to improve the process required to enable C-A to improve percent of
 - guests/users linked to job specific training assessments and
 - JTA profiles for guests/users reviewed /updated yearly for additional T&Q needs
2. As indicated by the FY 2001 Recordable Case Rate, injuries were not severe enough to result in significant lost work; however, a low-level awareness program has been instituted in order to help staff reduce the number of injury events in order to meet the Department goal.
3. C-A Family ATS (766.1.1) will track to completion the installation of the AGS H Region Soil Cap and RHIC beam dump cap extension.
4. Continue to employ the BNL Quality Program and Services Office to provide assistance in performing scheduled C-A assessments.

<i>ASSESSMENT CRITERIA 1: Leadership Commitment and Involvement</i>			
<i>OBJECTIVE:</i> Excellence in environmental responsibility and safety in all Department operations.			
<i>APPROACH:</i> ES&H <ul style="list-style-type: none"> a) Conduct an EMS management review in accordance with the “Environmental Assessments” Subject Area to ensure the continuing suitability, adequacy and effectiveness of the EMS. b) Successfully undergo the ISO 14001 surveillance audit. 			
Measures	Indicators	Responsibility	Schedule/Due Date
Management Review Completed in accordance with the “Environmental Assessments” Subject Area. Management review completed and “Record of Decision” issued		EMS Representative	Annual September 2002
<u>Results:</u> <u>Action Items:</u>			
ES&H SAM- Maintain ISO 14001 Registration ISO 14001 surveillance audit performed by third party, ISO 14001 registration maintained. (ES&H SAM)		Associate Chair for ESHQ	Annual June 2002
<u>Results:</u> <u>Action Items:</u>			

ASSESSMENT CRITERIA 2: Human Resource Development and Management

OBJECTIVE:

- 1 Create a pool of talented, empowered, motivated, and goal oriented leaders/managers/workers to support and enhance the C-A competitive position within the DOE laboratory complex.
- 2 Provide a high quality work environment that enhances C-A's ability retain and attract an excellent workforce.

APPROACH:

- 1 Planning for staff development is accomplished via the C-A long-range staffing plan.
- 2 Training is promoted via the C-A Training Plan as described in OPM 1.12, Conduct of Training Policy (Training Plan).
- 3 The overall training strategy is found in two documents:
 - a) [Training Plan Agreement](http://www.rhichome.bnl.gov/AGS/Accel/SND/Training/trainplan.pdf) (http://www.rhichome.bnl.gov/AGS/Accel/SND/Training/trainplan.pdf)
 - b) [Training Plan](http://www.rhichome.bnl.gov/AGS/Accel/SND/OPM/Ch01/01-12.PDF) (http://www.rhichome.bnl.gov/AGS/Accel/SND/OPM/Ch01/01-12.PDF)
4. Environmental training, which is process specific, may be found at: [Training-Process Specific](http://www.esh.bnl.gov/esd/Internal/ags/C-A.htm) (http://www.esh.bnl.gov/esd/Internal/ags/C-A.htm)
5. C-A promotes education of its staff through the laboratory reimbursement program for continued college-level education. In addition, C-A encourages and supports its staff to attend technical industrial courses as well as various accelerator and high energy and nuclear physics conferences.
6. Via C-A OPM 9.4.2, Self Evaluations, a self-critical attitude is fostered throughout the department from workers to senior management, this provides the basis for correcting weaknesses as well as promoting best practices. A self-assessment database for action required/completed is maintained by the C-A ES&H/Q Division.
7. Perform periodic assessments to determine adequacy and effectiveness of listed strategies to achieve objective.

Measures	Indicators	Responsibility	Schedule/Due Date
Management & Operations SAM – Training and Qualifications Training and Qualification (T&Q) Performance Permanent Employees <ol style="list-style-type: none"> 1. % of C-A staff linked to job specific training assessments. (outstanding rating is $\geq 95\%$) 2. % of T&Q requirements completed by C-A staff (outstanding rating is $\geq 95\%$) Transient Staff <ol style="list-style-type: none"> 1. % of staff linked to job specific training assessments. (outstanding rating is $\geq 80\%$) 2. % of T&Q requirements completed by staff (outstanding rating is $\geq 80\%$) 	% of required training completed.	Training & Procedures Manager	Semiannual June 2002
<u>Results:</u>			
<u>Action Items:</u>			

<i>ASSESSMENT CRITERIA 3: Customer Focus and Satisfaction (Customer Value)</i>			
<i>OBJECTIVE:</i> Operate the C-A facility in a manner that is responsive to C-A internal and external customer expectations.			
<i>APPROACH:</i> <ol style="list-style-type: none"> 1. Understanding of customer and market needs is accomplished via discussions, formal proposals and formal agreements between experimenters (users) and C-A staff. 2. Stakeholders inquiries related to the operation of the C-A are recorded in the BNL Correspondence and Commitment Tracking System maintained by the Collider-Accelerator Department 3. Support BNL's initiative regarding the BNL Communication and Trust critical outcome. 4. Customer and stakeholder expectations are identified in Memoranda of Agreement/Understanding between C-A Operations and the facility users. Integrating user and performance expectations into the C-A management systems is accomplished by setting operational goals, which are documented in OPM 2.1, C-A Operations Organization & Administration . 5. The AGS/RHIC Users Committee is a committee that represents the user community in various matters, such as programmatic satisfaction and dissatisfaction, quality of life matters, etc. They communicate both verbally and in writing to the directorate as well as line managers. 6. C-A appoints a liaison-physicist and engineer to each experiment. These individuals communicate with the Experimental Spokesperson, who is chosen from among the users. During construction of experiments, users meet with liaison engineers on a weekly (sometimes daily) basis, to layout experimental apparatus. This interaction allows users to have input at the design stage and leads to optimum layout for efficient running of experimental apparatus. 7. During operations, the weekly Time Meetings allow experimenters to discuss status, identify scheduling priorities, identify user requirements for the up coming week, voice complaints and at the same time, provide easy immediate access to all the C-A resources and staff. 8. Perform periodic assessments to determine adequacy and effectiveness of listed strategies to achieve objective. 			
Measures	Indicators	Responsibility	Schedule/Due Date
Measure 3.5.2, Stakeholder Involvement and Understanding Verify senior management is aware of the requirements of the Laboratory Decision-Making and Community Involvement subject area.	Completion of the Laboratory Decision-Making and Community Involvement training program.	Department Chairman	Annual August 2002
<u>Results:</u>			
<u>Action Items:</u>			
Verify that community involvement requirements have been incorporated into senior management's R2A2.	R2A2 updated and approved	Department Chairman	Annual August 2002
<u>Results:</u>			
<u>Action Items:</u>			

ASSESSMENT CRITERIA 4: Process Management

OBJECTIVE:

Establish, maintain and improve C-A processes/procedures for implementing Laboratory and organizational expectations.

APPROACH:

- 1 Implement the requirements of ESH Standard 1.3.5. C-A OPM 9.2.1, Procedure For Reviewing Environmental, Health and Safety Aspects Of An Experiment ensures C-A complies with BNL requirements for the planning and control of experiments as defined in ESH Standard 1.3.5
- 2 Implement work planning and controls requirements per ESH Standard 1.3.6. C-A OPM 2.28, C-A Procedure For Enhanced Work Planning (which includes Stop Work policy) ensures C-A complies with BNL requirements for work planning and control systems as defined in ESH Standard 1.3.6. Assessment of the implementation of the C-A work planning process is performed as part of the C-A Tier I Inspections. All EWP systems within C-A shall be reviewed at a frequency specified by the C-A Work Control Manager.
- 3 Implementation of the BNL ES&H programs, including the EMS, and Conduct of Operations is verified via scheduled inspections, audits and C-A management, independent and self-assessments. These programs are documented in OPM Chapter 9 procedures (e.g. Tier I and Self-Evaluations), C-A OPM 13.10.1, Independent Assessments and applicable subject areas. Reports are documented and include a description of the findings, corrective action(s), and identification of responsible individual(s).
- 4 Periodically assess C-A performance for implementation of Laboratory SBMS and internal process. The scope and frequency of assessment areas is based on
 - Importance, status, risk, and complexity of the activity, item or process;
 - Problems encountered with the activity, or item;
 - Scheduling of specific activities;
 - Availability of qualified personnel;
 - A review of findings reported in previous assessments.This objective supports those assessments performed in compliance objective.

Measures	Indicators	Responsibility	Schedule/Due Date
ES&H SAM- Maintain ISO 14001 Registration Perform an assessment of the Environmental Management System in accordance with the "Environmental Assessments" Subject Area and C-A OPM 13.10.1, Independent Assessments.		EMS Representative	Annual May 2002

Results:

Action Items:

ES&H SAM- Radiological Control Assess implementation of C-A ALARA program.		Q Group	Annual June 2002
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Results:

Action Items:

ES&H SAM- Radiological Control Assess implementation and adequacy of C-A calibration programs as applicable to radiological control instrumentation.		Q Group	Annual June 2002
<u>Results:</u> <u>Action Items:</u>			
ES&H SAM –Regulated Waste Management Assess implementation of C-A OPM 8.20 Procedure for Handling and Disposal of Hazardous Waste and 8.20.1 C-A Hazardous Waste Trailer (HWT) (90-Day Accumulation Area)		Q Group	Annual June 2002
<u>Results:</u> <u>Action Items:</u>			
ES&H SAM – Worker Involvement in Work Planning and Control Assess implementation of C-A OPM 2.28, C-A Procedure For Enhanced Work Planning, key criteria is worker’s perspective of their involvement in work planning and control activities.	% of work permits with worker feedback	Q Group	Annual June 2002
<u>Results:</u> <u>Action Items:</u>			
Infrastructure, Facilities, and Operations SAM- Building Manager Program Assess implementation of C-A OPM 2.31, C-A Building Management. Assessment shall include progress in enhancing Facility Use Agreement documents and processes.		Q Group	Annual June 2002
<u>Results:</u> <u>Action Items:</u>			
Infrastructure, Facilities, and Operations SAM- Energy Management Assess implementation of C-A OPM 2.30, Monitoring, Controlling and Minimizing Unnecessary Power Consumption by C-A Accelerators		Q Group	Annual June 2002
<u>Results:</u> <u>Action Items:</u>			

Measure 3.2.2.2, Transportation Safety Implementation Have C-A personnel who need the BNL Hazardous Material training been identified? Have the JTA of those individuals identified as requiring the BNL Hazardous Material training been revised?	% of required training completed.	Training & Procedures Manager	Semiannual June 2002
<u>Results:</u> <u>Action Items:</u>			
Measure 3.2.2.4.1, Chemical Inventories and Accountabilities Assess implementation of C-A OPM 1.8, Hazard Communication Procedure and SBMS Working with Chemicals subject area.		Q Group	Annual January 2002
<u>Results:</u> <u>Action Items:</u>			
Assess implementation of the following QA procedures OPM 13.1.1 Quality and Environmental Management System OPM 13.3.2 Nonconformance and Corrective and Preventive Action OPM 13.4.1 Records Management OPM 13.4.2 Records Index OPM 13.6.1 Preparation & Issuance of Engineering Drawings /Specs OPM 13.6.2 Configuration Management OPM 13.10.1Independent Assessment		Q Group	Annual July 2002
<u>Results:</u> <u>Action Items:</u>			

ASSESSMENT CRITERIA 5: Business and Operational Results

OBJECTIVE:

- 1 Design and construct new accelerator facilities in support of the BNL and national missions.
- 2 Operational
 - a) Operate and improve the suite of proton/heavy ion accelerators and beam transports used to carry out the program of accelerator-based experiments at BNL thus supporting the research mission of the laboratory's user population.
 - b) Support the experimental program including design, construction, and operation of the beam transports to the experiments plus partial support of detector and research needs of the experiments

APPROACH:

- 1 Report construction and operational progress/status to senior management at a frequency established by department/project management.
- 2 Operational:
 - a) The C-A mission is defined in Field Work Proposals (FWP), Conceptual Design Reports and Project Management Plans.
 - b) Changes and upgrades to the accelerators are described in the Accelerator Improvement Projects.
 - c) ES&H improvements are captured in Safety and Health Activity Data Sheets and in the EPA Phase II Process Evaluations.

Measures	Indicators	Responsibility	Schedule/Due Date
Basic Science & Technology: Success in Constructing and Operating Research Facilities <ol style="list-style-type: none">1. C-A Operations per FY02 Schedule and the accelerator performance meets the operational goals as specified in the FY 2002 Field Work Proposal.2. Meet critical milestones of the Spallation Neutron Source (SNS) as defined in SNS Project Plan.		a. Department Chairman b. SNS Project Manager	Per plans

Results:

Action Items:

<i>ASSESSMENT CRITERIA 6:</i> Compliance with Laws Regulations and Contractual Requirements			
<p><i>OBJECTIVE:</i> Maintain compliance with applicable BNL regulations and contractual expectations.</p>			
<p><i>APPROACH</i></p> <ol style="list-style-type: none"> Compliance requirements are communicated to C-A staff through participation on Laboratory committees, Laboratory Work Groups and through the SBMS. Senior C-A Electrical Engineers and senior C-A staff participate on the Laboratory Electrical Planning Committee, Laboratory Environmental, Health and Safety Committee, Radiation Protection Working Group, Environmental Management System Implementation Group, and Laboratory Electrical Safety Committee, all of which meet regularly. In accordance with the BNL EMS, a regulatory compliance assessment, environmental management review, and EMS assessment shall be performed annually. <ol style="list-style-type: none"> Ensuring compliance to applicable requirements is addressed via scheduled inspections, audits and C-A management, independent and self-assessments. These programs are documented in the C-A OPM, and applicable subject areas. Reports are documented and include a description of the findings, corrective action(s), and identification of responsible individual(s). A general index of C-A ESHQ programs can be found at http://server.rhichome.bnl.gov/SND/indexoftopics.htm. Perform periodic assessments to determine adequacy and effectiveness of listed strategies to achieve objective. 			
Measures	Indicators	Responsibility	Schedule/Due Date
<p>(ES&H SAM- Environmental Compliance) Verify C-A Environmental Compliance Representative (ECR) performs annual reviews of C-A's compliance with regulatory requirements; including</p> <ul style="list-style-type: none"> Air emissions (radioactive and non-radioactive; i.e. Clean Air Act and NESHAPs) PCB Management 		Associate Chair for ESHQ	Annual May 2002
<p><u>Results:</u></p> <p><u>Action Items:</u></p>			
<p>Radiological Control Excellence: C-A Collective Dose Goal for FY 02 is 23.0 person-rem This was the recommended dose goal as stated in the "Minutes from a review of the proposed C-A dose goal for FY 02", dated 10/22/2001.</p>		Associate Chair for ESHQ	Quarterly (Performance Indicator)
<p><u>Results:</u></p> <p><u>Action Items:</u></p>			
<p>Measure 3.2.2.3 - OSHA Reportable Injury Management Total Recordable Case Rate (TRCR), CY 02 Goal = 1.5 Lost Workday Case Rate(LWCR) CY 02 Goal = .5 Lost Workday Rate (LWDR) CY 02 Goal = 25</p>		Associate Chair for ESHQ	Quarterly (Performance Indicator)

<u>Results:</u>											
<u>Action Items:</u>											
Environmental Excellence Waste Management Divisions 2002 projected volumes of waste for C-A. C-A Environmental Coordinator concurred with projected volumes <table><tr><td><u>Goal</u></td><td><u>Waste Type</u></td></tr><tr><td>450 ft³.</td><td>Hazardous Waste</td></tr><tr><td>3000 ft³.</td><td>Radioactive Waste</td></tr><tr><td>45 ft³.</td><td>Mixed Waste</td></tr></table>	<u>Goal</u>	<u>Waste Type</u>	450 ft ³ .	Hazardous Waste	3000 ft ³ .	Radioactive Waste	45 ft ³ .	Mixed Waste		Associate Chair for ESHQ	Quarterly (Performance Indicator)
<u>Goal</u>	<u>Waste Type</u>										
450 ft ³ .	Hazardous Waste										
3000 ft ³ .	Radioactive Waste										
45 ft ³ .	Mixed Waste										
<u>Results:</u>											
<u>Action Items:</u>											
Measure 3.2.1 - Legacy ES&H Risk Management Establish a site hazard footprint for the following areas. A “footprint” is defined as records in the form of drawings, databases, and other documents, which collectively define the scope of the hazard. AGS Lead Yard AGS Steel Yard AGS Block Yard		Associate Chair for ESHQ	Annual August 2002								
<u>Results:</u>											
<u>Action Items:</u>											
Measure 3.2.2.1 Pollution Prevention Verify that C-A is actively involved in the BNL Pollution Prevention Program . i.e. by submitting at least two pollution prevention project proposals to the P2 Council and/or two success stories and/or lesson learned stories		Associate Chair for ESHQ	Annual May 2002								
<u>Results:</u>											
<u>Action Items:</u>											
Report percent of scheduled assessments completed.	% of required assessments completed.	Q Group	Annual August 2002								
<u>Results:</u>											
<u>Action Items:</u>											